

Mercury Advisory Committee Meeting, April 29, 2002 Draft Meeting Summary

Introduction

The Mercury Advisory Committee (MAC) met for the first time on April 29, 2002 at the Washington Department of Ecology (Ecology) in Lacey. Members of the MAC as well as individuals from various public and special interest groups attended the meeting. The purpose of this meeting was to provide information on mercury releases in Washington, to allow committee members to provide input on Ecology's understanding of mercury sources, pathways, and current reduction efforts, and to identify criteria for prioritizing reduction options.

This summary is not a comprehensive set of meeting minutes. Rather, it captures the highlights of points discussed, and more specifically, focuses on accurately summarizing input from committee members on the draft mercury background information document.

Following introductions by all meeting participants, facilitator Lane Nothman from Ross & Associates reviewed the agenda. It was recommended that the facilitator allow individuals from the public to contribute comments and expertise throughout the meeting. Some also commented that the schedule for allowing public comments on the current draft plan should be extended.

Presentations and Questions

The first part of the meeting consisted of a series of presentations from Mike Gallagher, PBT Coordinator for Ecology, Dr. Harriet Ammann, Senior Toxicologist at the Washington State Department of Health, and Cheri Peele, Mercury Policy Coordinator for Ecology. The presentations, as well as the questions and discussion that they sparked, are summarized below.

Mercury Chemical Action Plan: Mercury Advisory Committee – Mike Gallagher from Ecology provided an introductory presentation on the development of Ecology's strategy for addressing Persistent Bioaccumulative Toxins (PBT). PBTs are chemicals whose harmful toxicity results primarily from their increase in concentration through the food chain. In 2001, the Washington Legislature appropriated \$800,000 for Ecology to develop a strategy to address PBTs. The Mercury Chemical Action Plan (MCAP), as part of this strategy, will aim to identify current uses and sources of mercury, analyze current regulations and voluntary reduction measures, identify mercury reduction and elimination options, and implement actions to reduce or eliminate mercury uses and releases. The final MCAP will be completed by the end of 2002 and implementation will begin in February, 2003. Within this process, the MAC will be involved in development of the state's MCAP by providing balanced representation from local government, business, agriculture, environmental and public health interests, and community groups.

Following the presentation, there was a comment that if fossil fuels are included in the global mercury "budget," then there is effectively a net gain in that budget. Alternative energy sources might cause this global budget to decrease. Another committee member mentioned that over the

course of the meeting and the MCAP development process, the committee should prioritize addressing sources that pose the highest risk to human health and the environment.

Mercury in the Environment and Human Health Effects – Dr. Harriet Ammann from the Washington Department of Health gave meeting participants an overview of mercury-related environmental and human health issues. After briefly explaining the chemistry of two forms of mercury found in the environment, elemental mercury and methylmercury, Dr. Ammann described the ways in which these are absorbed into plants and animals. While elemental mercury vapor can cause problems through inhalation, methylmercury is more readily absorbed by organisms and has thus received more attention in efforts to reduce detrimental health and environmental effects of mercury. Effects of mercury poisoning have been documented through case studies from around the world. Increasingly, neurological effects of low-level exposure are subjects of concern.

Meeting participants asked specifically if the effects of mercury on shellfish and Orcas have been studied. Dr. Ammann indicated that there are efforts underway to do so. It was also noted that while the presentation cited examples of health effects studies from other countries, and while there have been fish-mercury studies in Washington State, there have not been any local mercury human health studies involving human subjects. Dr. Ammann and others responded that based on knowledge of food consumption and data on the amount of mercury in food (e.g. fish), health effects can be predicted, regardless of where studies have been performed. A question was also raised about the presentation's assertion that methylmercury levels are 7 million times higher in predator fish than in the surrounding water. While circumstances do vary, this is an accepted rule of thumb.

Profile of Mercury Sources and Reduction Efforts: Nationwide and in Washington State – Cheri Peele from Ecology described some of the natural and anthropogenic mercury sources that affect the state and the steps being taken to reduce these sources. Ecology is coordinating with other jurisdictions to address mercury source issues at the local and national levels (e.g. thermometers, coal power plant emissions). Ms. Peele stated that she will attend a national mercury reduction planning meeting in Boston during the week of April 29, 2002 during which representatives from EPA and other state environmental agencies will discuss reduction efforts as well as methods for coordination.

Meeting participants discussed sources of mercury mentioned in the presentation. While chlor-alkali facilities are no longer in operation, and mercury used in production activities has been removed, the facility sites still have cleanup needs. Autoclaves can be sources through evaporation of elemental mercury. Participants also discussed the cost of mercury cleanup in an institution that must follow specific cleanup procedures. Ms. Peele estimated a minimum cleanup cost of \$1000. While some questioned whether or not this was a realistic estimate, other participants gave anecdotal examples of where the costs had been even greater. Someone asked if Ecology planned to do a careful examination of existing reduction strategies. The department plans to document these sorts of activities as part of the MCAP development process.

Advisory Committee Member Comments

Each advisory committee member was given a chance to comment on the morning's presentations and the background information document as part of the development of the MCAP. The following paragraphs summarize the statements of each committee member.

Dr. Sandy Rock (Community Groups) Physicians for Social Responsibility

Dr. Rock emphasized that Physicians for Social Responsibility has a zero tolerance policy for mercury. As it is well established that even small amounts of mercury are toxic, especially to vulnerable populations such as children and certain animals, the organization promotes the removal of mercury from the environment as a key component to successful preventative health care. Many products that use mercury now have cost effective alternatives. Dr. Rock specifically supported earlier assertions that mercury clean up costs can be very high. He concluded by saying that while significant quantities of mercury come from fossil fuel and natural sources, this committee should support Ecology in developing a strategy to quickly remove mercury from the environment wherever possible.

Charlie Brown (Agriculture) Advocates, Inc.

Mr. Brown noted that the morning's presentations had little information about the uses of mercury in agriculture. Ecology could examine whether or not other regulatory bodies allow mercury in fungicides and pesticides, and the extent to which products that contain mercury, such as switches, thermometers, and/or fluorescent lights, are in use in agricultural settings. Mr. Brown emphasized the importance of prioritizing mercury reduction strategies based on their cost-effectiveness as opposed to attempting to eliminate all mercury from the environment.

Lenora Westbrook (Business-Private Utilities) Environmental Manager: TransAlta Centralia Operations

Ms. Westbrook emphasized that fossil fuel emissions contain significant quantities of mercury and should therefore receive more attention in the action plan. Some effective mercury emissions reductions strategies are already being used by some private utilities including coal washing and implementation of electrostatic precipitators. Ms. Westbrook emphasized the importance of comparing the costs and benefits of various reduction strategies.

Grant Nelson (Business-Retail/Manufacturing) Association of Washington Businesses

Mr. Nelson began by asking committee members to be cognizant of industry groups not at the table. He recommended several components to a successful action plan development process including careful definition of goals for reducing mercury risk and exposure, a solid scientific foundation for all reduction strategies, consideration of economic and technical feasibility, and cost-benefit analyses of reduction strategies. Throughout the process, committee members and others should remember that mercury is still the best material for several products. Mr. Nelson emphasized that scare tactics and hype should be avoided and that strategies should be prioritized by addressing the sources that present the highest level of risk.

Craig Lorch (Business-Recycling)
Total Reclaim, Inc.

Ecolights Northwest, a subsidiary of Total Reclaim, currently recycles 1.5 million lamps per year. The mercury contained in these mostly commercial and industrial lamps is collected and sent to another company for resale. Mr. Lorch alerted the committee to widening uses of mercury in products such as high intensity auto lamps and flat screen monitors. One potentially important source of mercury that receives little attention is personal stockpiles in homes or schools that serve little purpose yet pose health and environmental risks. Mr. Lorch underscored his support for the action plan development process.

Natalia Kreitzer – attending for Naydene Maykut of the Puget Sound Clean Air Agency (Local Government)
Southwest Clean Air Agency

Ms. Kreitzer emphasized the cost-effectiveness of removing mercury before it reaches the air. For example, separating mercury from waste before it is incinerated is far cheaper than removing the mercury from the environment after it is discharged as air emissions.

Laurie Valeriano (Environmental Organizations)
Washington Toxics Coalition

The goals of the Washington Toxics Coalition are much in-line with those of Physicians for Social Responsibility. Ms. Valeriano specified that the action plan aims to eliminate mercury from the environment. Pathways of risk and exposure, such as from mothers to infants and from the ambient environment up the food chain to larger animals, should receive careful attention. Echoing the statement of the Puget Sound clean air agency, Ms. Valeriano said that clean up is not an effective strategy and that the plan should focus on prevention. She mentioned some sources of mercury that are now missing from the plan including hog fuel boilers, fertilizers, coal-fired power plants, and certain health care and consumer products. The 1997 EPA Report to Congress documents the effects of these sources on wildlife and human health.

Dr. Steve Gilbert (Public Health)
Institute of Neurotoxicology and Neurological Disorders

As the director for the Institute of Neurotoxicology and Neurological Disorders, Dr. Gilbert stressed that exposure to toxins such as mercury should not be allowed to inhibit anyone from reaching their full genetic potential. Recognizing that children are especially susceptible to low-level exposure, even if effects of exposure are not evident in parents, the Institute focuses on children and others in society that are most sensitive. Low-level exposure can cause subtle but important health effects such as decreased IQ. In light of these health risks, Dr. Gilbert said that society has an ethical responsibility to keep the environment safe for children.

Dave Hufford (Local Government)
City of Tacoma Sewage Treatment Plant

Speaking from his experience in waste management, Mr. Hufford emphasized the extreme costs and difficulty associated with removing mercury from wastewater. The more effective solution is to eliminate the toxin at the source. Wastewater is responsible for about 1% of mercury discharged into the environment. When mercury reaches a wastewater plant, it is usually not

removed due to cost considerations but instead transferred to another medium such as sewage sludge or air emissions. Representing Tacoma's solid waste perspective as well, Mr. Hufford stated that source control is also the most effective method of reducing mercury in solid waste.

Gordon Kelly (Public Health)
Yakima County Health District

Mr. Kelly gave the committee a practical perspective on the ability of local health districts to address mercury issues. The budget for the Yakima County Health District is almost entirely allocated for specific functions. Since mercury source control is not included in these specific functions, mercury can only be addressed through discretionary funds, which constitute a very small percentage of the overall budget. Essentially, District actions are limited to those that are specifically funded. In light of these resource constraints, Mr. Kelly emphasized the importance of prioritizing mercury reduction actions based on cost-benefit analysis.

Gary Smith (Small Business)
Independent Business Association

Mr. Smith said that there are 180,000+ small business owners in Washington State and almost all are unaware of issues associated with mercury. Many are focusing on auto wrecking industry to remove switches before recycling of the vehicle. Two problems: many of the switches are broken at the time of collision and the mercury has already been released, so switches must be removed before collisions occur; and vehicle recyclers only dismantle about 30% - 40% of the wrecked vehicles, the rest go to non-regulated members of the public. He voiced concern that if this industry was forced to clean up for mercury spills with the same procedures and costs (\$1,000 average) of hospitals and other institutions, the industry would go out of business. Mr. Smith requested a copy of the EPA mercury plan draft that Ecology has received, and to provide the Committee an overview of the current regulations in Washington State and other jurisdictions before trying to identify strategies. He said solutions must be practical and an informed benefit-cost analysis must be done before any strategies are recommended. Mr. Smith was concerned about the timeline of the action plan process and suggested that Ecology should not try to design individual strategies but instead focus on development of a solid high-level approach that prioritizes solutions based on cost-benefit analysis.

Stephanie Marvin, DDS (Business-Dental)
Washington State Dental Association

Ms. Marvin represents dental associates at the local, state, and federal levels. She described some of the new measures being taken to reduce the effects of dental amalgam as a source of mercury including a requirement to install separators in all new dental facilities. Dental associations strongly underscore that dental amalgam is a safe product and that dentists as a whole are not part of the overall problem but instead already acting as part of the solution.

Robb Menaul (Business- Medical)
Washington State Hospital Association

When legislation was first introduced, members of the Washington State Hospital Association anticipated that mercury would not be a significant problem and would be phased out of use. However, Mr. Menaul said that the presentations and information shared over the course of this committee meeting indicated that there are uses of mercury to which hospitals should continue to

pay close attention. Nursing homes should also be mentioned since they use much of the same equipment as hospitals and have smaller budgets.

Discussion Following Committee Member Statements

Following formal statements, committee members and meeting attendees from the public were given time to discuss topics raised over the course of the meeting. The bullets listed below summarize points made during this discussion.

- Vicky Austin, a public participant from the Washington Dental Association, suggested that it would be useful to create a schematic showing the current state of affairs including information on current mercury regulations and sources. Ms. Peele emphasized Ecology's intention of examining other reduction programs at the local and federal levels to ensure a coordinated approach.
- Ms. Ammann emphasized that the chemical action plan focuses on prevention. The success of the plan is marked by a lack of health effects. However, it is often difficult to gain support for preventative actions if problems are not evident.
- Meeting participants discussed the format of the action plan. Some suggested that the format should focus more on high level strategies since development of detailed reduction strategies for all sources is an unrealistic goal given the timeframe of the action plan development process. Others referred to legislative language that specifies that the action plan should address sources, relevant laws, and recommended actions.

Public Comment Period

Meeting attendees from the public were given an opportunity to comment on presentations and the action plan process. Their comments are summarized below:

Greg Dana, Auto Industry Representative – While the auto industry uses mercury for a variety of products including switches, lights, and flat-screen displays, uses are declining. Mr. Dana indicated that he would submit comments on the action plan in written form.

Kris Holm, American Chemistry Council – The American Chemistry Council is interested in the development of the MCAP because it will likely serve as a prototype for other chemical action plans. While acknowledging the value of the action plan in providing a picture of current mercury-related activities in the state, Ms. Holm was concerned that Ecology was not conducting thorough outreach measures to gather information for the action plan. She cited the gold industry as an example of an interested party that should be present during action plan discussions. The action plan development process should also recognize the role of federal regulations and coordinate with these other regulations and programs.

Robin Appleford, Waste Representative – Landfills are regulated every five years. Because of the costs associated with changing operations based on new regulations, Ms. Appleford asked that

Ecology work closely with landfill operators as early as possible in the process to explain how regulatory structures will change.

Ivy Sager-Rosenthal, WashPIRG – Ms. Sager-Rosenthal asserted WashPIRG's position of the need for strong public outreach in the development of the MCAP. She also suggested that Ecology should be mindful of existing laws and regulatory structures.

Jerry Smeads, Smeads & Associates – As a consultant in the waste management field, Mr. Smead emphasized the importance of prioritizing reduction strategies through cost benefit analysis. He also said that Ecology should avoid imposing unrealistic burdens on those managing the waste.

Brainstorm and Discussion on Criteria for Prioritizing Reduction Options

Facilitator Lane Nothman led the committee in brainstorming criteria to help Ecology prioritize mercury reduction options for the MCAP. The committee members' suggestions to Ecology are summarized below:

- Examine existing reduction options and regulations before considering new ones; assess past successes and failures for lessons learned.
- Focus reduction strategies on prevention.
- Use the MCAP as an opportunity for public education about mercury and toxicology.
- Consider the size of the source, the cost of possible reduction actions, and the possibility of measurable outcomes in prioritizing reduction strategies.

Wrap-up and Next Steps

Committee members voiced interest in having presentations for the meeting posted on Ecology's PBT website in advance of the meeting. Some also suggested that Ms. Peele, upon her return from the national mercury-planning meeting in Boston, should post notes or a meeting summary to share information about national efforts and activities.

Participants agreed that the next draft of the MCAP will be distributed on May 29, 2002 and that the next MAC meeting will occur on June 10, 2002. The meeting then adjourned.